

Table 1K
Mass of Chemicals Placed in CAMU Unit 2
HWD-5 Landfill and TTP Area Post-Closure Groundwater Monitoring - Second Quarter 2017
U.S. Steel - Gary Works
Gary, Indiana

Parameter	Location ID	HWD-5-06D	HWD-5-06S	HWD-5-07D	HWD-5-07S	HWD-5-08D	HWD-5-08D	HWD-5-08S	HWD-5-09D	HWD-5-09S	HWD-5-10D	HWD-5-10S	HWD-5-14D	HWD-5-14SR	WE-MW-13D	WE-MW-13S	WE-MW-13S	WE-MW-4	WE-MW-5D
	Sample Type	Regular	Regular	Regular	Regular	Regular	Duplicate	Regular	Regular	Regular	Regular	Regular	Regular	Regular	Regular	Regular	Duplicate	Regular	Regular
	Sample Date	06/14/17	06/14/17	06/14/17	06/14/17	06/14/17	06/14/17	06/14/17	06/15/17	06/15/17	06/15/17	06/15/17	06/15/17	06/15/17	06/14/17	06/14/17	06/14/17	06/15/17	06/15/17
	Units																		
Volatile Organic Compounds (VOCs)																			
Benzene	ug/l	16	0.34	13	15	15	42	0.5	5.1	0.73	6.5	0.73	6.2	18	130	0.5	0.5	0.49	4.3
Ethylbenzene	ug/l	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
m&p-Xylene	ug/l	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
o-Xylene	ug/l	0.5	0.37	0.5	0.47	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Toluene	ug/l	0.43	0.56	0.5	0.8	0.5	0.64	0.5	0.5	0.5	0.5	0.38	0.5	15	1.2	0.5	0.5	0.88	0.5
Xylenes (total)	ug/l	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Polynuclear Aromatic Hydrocarbons (PAHs)																			
Acenaphthene	ug/l	0.05	4.9	0.05	5.1	0.05	0.05	0.05	0.05	0.96	0.05	0.94	0.05	0.055	0.05	0.05	0.05	0.52	0.05
Acenaphthylene	ug/l	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.11	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Anthracene	ug/l	0.05	0.59	0.05	0.92	0.05	0.05	0.05	0.05	0.22	0.05	0.2	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Benzo(a)anthracene	ug/l	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Benzo(a)pyrene	ug/l	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Benzo(b)fluoranthene	ug/l	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Benzo(g,h,i)perylene	ug/l	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Benzo(k)fluoranthene	ug/l	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Chrysene	ug/l	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Dibenz(a,h)anthracene	ug/l	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Fluoranthene	ug/l	0.05	0.96	0.05	1.7	0.05	0.1	0.05	0.05	0.44	0.05	0.31	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Fluorene	ug/l	0.05	2.1	0.05	4	0.05	0.05	0.05	0.05	0.63	0.05	0.68	0.05	0.055	0.05	0.05	0.05	0.39	0.05
Indeno(1,2,3-cd)pyrene	ug/l	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Naphthalene	ug/l	0.05	8.2	0.05	35	0.05	0.05	0.05	0.05	4.4	0.05	4.3	0.05	2.5	0.05	0.05	0.05	0.74	0.05
Phenanthrene	ug/l	0.05	3.6	0.05	6.9	0.05	0.05	0.05	0.05	1.7	0.05	1.3	0.05	0.66	0.05	0.05	0.05	0.56	0.05
Pyrene	ug/l	0.05	0.52	0.05	1.1	0.05	0.06	0.05	0.05	0.36	0.05	0.28	0.05	0.055	0.05	0.05	0.05	0.05	0.05
Dissolved Metals																			
Arsenic, dissolved	mg/l	0.049	0.0025	0.061	0.0025	0.024	0.025	0.023	0.0086	0.0022	0.021	0.0027	0.037	0.039	0.029	0.0064	0.0071	0.0035	0.06
Cadmium, dissolved	mg/l	0.0028	0.0014	0.0018	0.0012	0.0011	0.0011	0.00091	0.0013	0.0013	0.001	0.0012	0.0016	0.0014	0.0018	0.005	0.005	0.00098	0.005
Calcium, dissolved	mg/l	340	420	110	140	87	87	96	68	130	70	120	88	10	98	79	79	61	170
Chromium, dissolved	mg/l	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00032	0.00028	0.00027	0.00043	0.00026	0.00036	0.0025	0.0025	0.0025	0.00029	0.00026
Iron, dissolved	mg/l	17	0.04	12	0.04	5.6	5.6	4	1.1	0.04	4.7	0.04	5.8	0.015	4.1	0.9	0.93	0.04	2.5
Iron, total	mg/l	19	0.012	12	0.031	5.8	5.7	4.3	1.7	0.04	5.8	0.04	6.1	0.19	4.4	0.96	0.95	0.0086	3.9
Lead, dissolved	mg/l	0.0025	0.0025	0.022 J	0.0025	0.0025	0.0025	0.0025	0.017	0.0025	0.017	0.0025	0.022	0.042	0.014	0.0055	0.0054	0.0061	0.0099
Magnesium, dissolved	mg/l	120	0.1	39	0.1	31	31	16	16	0.1	17	0.1	28	0.1	31	9.9	9.9	0.1	1.1
Mercury, dissolved	mg/l	0.0001	0.000038	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00032	0.0001	0.0001	0.0001	0.0001	0.0001
Potassium, dissolved	mg/l	6	65	8.8	390	2	2	3.9	19	330	25	390	56	1,000	1.8	4.5	4.4	170	55
Silicon, dissolved	mg/l	18	0.57	21	2.6	16	16	9.9	16	2.2	16	3.3	20	35	14	7.8	7.7	6.8	12
Sodium, dissolved	mg/l	580	33	150	250	24	24	24	120	250	96	270	100	860	34	41	39	140	320
Zinc, dissolved	mg/l	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.0016	0.0016	0.0022	0.005	0.0034	0.0024	0.005	0.005	0.005	0.005	0.005
General Chemistry																			
Alkalinity, Total as CaCO3	mg/l	210	1,000	290	770	310	310	260	130	560	210	590	280	1,300	310	230	230	200	86
Alkalinity, Bicarb.(CaCO3)	mg/l	210	5	290	5	310	310	260	130	5	210	5	280	5	310	230	230	5	86
Alkalinity, Carb. (CaCO3)	mg/l	5	63	5	110	5	5	5	5	69	5	78	5	270	5	5	5	64	5
Ammonia as N	mg/l	9.3	1.3	14	4.1	3.2	3.1	0.81	4.4	5	7	4.8	8.5	14	2.2	0.23	0.23	7.7	12
Chloride	mg/l	1,600	19	330	380	43	42	27	210	410	200	470	250	1,100	61	20	20	260	820
Nitrate as N	mg/l	0.5	0.05	0.1	0.1	0.05	0.05	0.05	0.87	0.1	0.05	0.1	0.05	0.5	0.05	0.05	0.05	0.1	0.50 U
Sulfate	mg/l	86	96	1.6	58	13	13	59	40	180	0.78	160	0.69	120	39	61	61	140	54
Sulfide	mg/l	0.5	7.7	0.5	14	0.5	0.5	0.5	0.5	7.3	0.5	9.3	0.5	36	0.5	0.5	0.5	4.4	0.5

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HWD-5 Landfill and TTP Area Post-Closure Groundwater Monitoring - Second Quarter 2017
U.S. Steel - Gary Works
Gary, Indiana

Parameter	Location ID	HWD-5-06D	WE-MW-5S	Median Concentration	Median Concentration	Mass of Chemicals in HWD-2 Purge Water Placed in CAMU Unit 2 (Based on Median Concentration)		
	Sample Type	Regular	Regular					
	Sample Date	06/14/17	6/15/2017					
	Units					mg/L	Milligrams	Kilograms
Volatile Organic Compounds (VOCs)								
Benzene	ug/l	16	0.34	6.2	0.0062	0.731724	7.32E-07	1.61E-06
Ethylbenzene	ug/l	0.5	0.5	0.5	0.0005	0.05901	5.90E-08	1.30E-07
m&p-Xylene	ug/l	1	1	1	0.001	0.11802	1.18E-07	2.60E-07
o-Xylene	ug/l	0.5	0.5	0.5	0.0005	0.05901	5.90E-08	1.30E-07
Toluene	ug/l	0.43	0.5	0.5	0.0005	0.05901	5.90E-08	1.30E-07
Xylenes (total)	ug/l	1.5	1.5	1.5	0.0015	0.17703	1.77E-07	3.89E-07
Polynuclear Aromatic Hydrocarbons (PAHs)								
Acenaphthene	ug/l	0.05	1.7	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Acenaphthylene	ug/l	0.05	0.05	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Anthracene	ug/l	0.05	0.49	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Benzo(a)anthracene	ug/l	0.05	0.05	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Benzo(a)pyrene	ug/l	0.05	0.05	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Benzo(b)fluoranthene	ug/l	0.05	0.05	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Benzo(g,h,i)perylene	ug/l	0.05	0.05	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Benzo(k)fluoranthene	ug/l	0.05	0.05	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Chrysene	ug/l	0.05	0.05	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Dibenz(a,h)anthracene	ug/l	0.05	0.05	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Fluoranthene	ug/l	0.05	0.68	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Fluorene	ug/l	0.05	1.2	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Indeno(1,2,3-cd)pyrene	ug/l	0.05	0.05	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Naphthalene	ug/l	0.05	3	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Phenanthrene	ug/l	0.05	3.5	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Pyrene	ug/l	0.05	0.56	0.05	0.00005	0.005901	5.90E-09	1.30E-08
Dissolved Metals								
Arsenic, dissolved	mg/l	0.049	0.0025	0.021	0.021	2.47842	2.48E-06	5.45E-06
Cadmium, dissolved	mg/l	0.0028	0.005	0.0014	0.0014	0.165228	1.65E-07	3.64E-07
Calcium, dissolved	mg/l	340	260	96	96	11329.92	1.13E-02	2.49E-02
Chromium, dissolved	mg/l	0.0025	0.00082	0.0025	0.0025	0.29505	2.95E-07	6.49E-07
Iron, dissolved	mg/l	17	0.04	1.1	1.1	129.822	1.30E-04	2.86E-04
Iron, total	mg/l	19	0.04	2.8	2.25	265.545	2.66E-04	5.84E-04
Lead, dissolved	mg/l	0.0025	0.0025	0.00395	0.004675	0.5517435	5.52E-07	1.21E-06
Magnesium, dissolved	mg/l	120	0.1	9.9	9.9	1168.398	1.17E-03	2.57E-03
Mercury, dissolved	mg/l	0.0001	0.0001	0.0001	0.0001	0.011802	1.18E-08	2.60E-08
Potassium, dissolved	mg/l	6	140	25	25	2950.5	2.95E-03	6.49E-03
Silicon, dissolved	mg/l	18	0.95	12	12	1416.24	1.42E-03	3.12E-03
Sodium, dissolved	mg/l	580	110	110	110	12982.2	1.30E-02	2.86E-02
Zinc, dissolved	mg/l	0.005	0.005	0.005	0.005	0.5901	5.90E-07	1.30E-06
General Chemistry								
Alkalinity, Total as CaCO3	mg/l	210	780	310	310	36586.2	3.66E-02	8.05E-02
Alkalinity, Bicarb.(CaCO3)	mg/l	210	5	130	130	15342.6	1.53E-02	3.38E-02
Alkalinity, Carb. (CaCO3)	mg/l	5	56	5	5	590.1	5.90E-04	1.30E-03
Ammonia as N	mg/l	9.3	3.1	4.8	4.8	566.496	5.66E-04	1.25E-03
Chloride	mg/l	1,600	160	250	250	29505	2.95E-02	6.49E-02
Nitrate as N	mg/l	0.5	0.05	0.075	0.0625	7.37625	7.38E-06	1.62E-05
Sulfate	mg/l	86	100	58	58	6845.16	6.85E-03	1.51E-02
Sulfide	mg/l	0.5	3.4	0.5	0.5	59.01	5.90E-05	1.30E-04

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Mass of Chemicals Placed in CAMU Unit 2
HWD-5 Landfill and TTP Area Post-Closure Groundwater Monitoring - Second Quarter 2017
U.S. Steel - Gary Works
Gary, Indiana

Notes:
mg/l = milligrams per liter
ug/l = micrograms per liter
R = Reject data result
Bold font indicates positive detection
Italics and shading indicate a non-detect result; one-half the reporting limit was used for non-detect results
Samples collected on June 14 and June15, 2017.
Per TRI Reporting guidance, the median value is used when a range of data values is present.
Volume of purge water place in CAMU = 31.14 gallons
Volume of purge water placed in CAMU (liters): (31.14 gal)(3.79 liter/gal) = 118.02 liters
Mass of individual chemicals placed in CAMU = (concentration)(volume of purge water)